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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/638,924	08/15/2000	William Lewis Betts	61607-1260	9164

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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 01/09/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/638,924

Applicant(s)

BETTS ET AL.

Examiner

Qutub Ghulamali

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application..
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-16 and 22-26, 30-33 is/are rejected.
- 7) ☒ Claim(s) 3-5, 17-21, 27-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Acknowledgment

1. This Office Action is responsive to the Amendment filed on 10/14/2003.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 13, 14, 15, 16, 25, 30, 32, and subsequent dependent claims, have been considered but are moot in view of the new ground(s) of rejection.

Rejections based on the newly cited reference(s) follow:

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6-16, 22-26, 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al ("Maxwell") (US Patent No. 4,771,417) in view of Marum (US Patent 6,553,062, new art).

Consider claims 1, 2, 13, 14, 15 16, 25, 30-33, Maxwell (figs. 1, 12) teaches a control circuit configured in the form of a processor to direct the overall operation of the modem (col. 4, lines 32-44), the ability of the modem to detect errors (transients) in data transmission, based upon the calculated ratio a determination is made whether the quality of the data transmission indicates qualification for a fallback (lowering the rate) in speed, if there had been

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retransmission of any data frame at least the predetermined number of times, and if the modem is linked in the lowest fallback speed, then the modem disconnects, if the link is not in the lowest fallback speed, the modem sets up the link for one step lower in speed and reenters the transmit sequence, if it is determined that a predetermined number of preceding transmitted frames included any retransmitted data the routine makes an evaluation for qualification to fallforward (higher rate) to a higher speed, to determine the quality of the line, the processor of the modem constantly monitors the number of errors in data transmission as reflected by the number of retransmitted data frames, if the number of retransmissions is high, indicating too many errors are encountered and line quality is poor, the modem drops down to the next lower speed until an acceptable reduction in errors in transmission is achieved. If the line quality improves and the number of errors is reduced, the modem will automatically fallforward to the next higher speed, if the acknowledgement does not come within a prescribed time out period the modem initiates recovery by establishing the link and reentering the transmit sequence, (col. 19, lines 46-67; col. 20, lines 10-18, 29-40).

Regarding claims 6, 7, 22, 23, 26 Maxwell discloses that the for interactive communication between data terminals, full-duplex operation is desired in such circumstances, the call connection often must be terminated (suspended) and reestablished in order to change between operation protocols, lowering the rate to essentially to zero (col. 2, lines 35-67; col. 18, lines 30-67).

Regarding claims 8-12, 24, Maxwell discloses interactive communication between data terminals, a modem inserted between the a Data Terminal Equipment (DTE) and the telephone line establish interactive data communications between data communication equipment with the

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remote modem, the modem can either fallback to a lower speed or fallforward to a higher speed (col.,1, lines 10-64; col. 19, lines 10-14, 47-66; col. 20, lines 28-42).

With reference to the above claims, Maxwell discloses data transmission involving a High Speed Modem, however, he fails to disclose use of data transmission in a DSL environment.

Marum discloses (figs. 1, 2, 3), a communication system that utilizes a high bit rate Digital signal (subscriber) Line (HDSL) for communicating data. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Maxwell's communication system by employing a high speed DSL modem for data communications in order to realize the full bandwidth capabilities on a dedicated digital data liner as taught by Marum (col. 1, lines 43-67; col. 2, lines 46-67; col. 4, lines 55-67).

Allowable Subject Matter

5. Claims 3-5, 17-21, 27-29 are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gosselin et al (US Patent 6,574,236), is cited as art of interest.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (703) 305-7868.

The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 703 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703 305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4750.

QG.

January 6, 2004

TESFALOT BOGURE
PRIMARY EXAMINER